# EQUIPMENT LIST "B"

# THIS PROJECT INVOLVES PROVIDING AUDIBLE PEDESTRIAN MOVEMENTS AND COUNTDOWN PEDESTRIAN SIGNAL HEADS AT THE EXISTING INTERSECTION OF MD 588 (KENWOOD AVE) AND HAZELWOOD AVENUE/ DELEGGE ROAD IN BALTIMORE COUNTY. THE EXISTING MAST ARM STRUCTURES, TRAFFIC SIGNAL HEADS AND STREET LIGHTING SHALL REMAIN. A NEW BASE — MOUNTED CABINET SHALL BE INSTALLED AND EQUIPMENT

MD 588 IS ASSUMED TO RUN IN NORTH-SOUTH DIRECTION.

## II. INTERSECTION OPERATION:

WILL BE REWIRED.

THE INTERSECTION OPERATES A NEMA FOUR — PHASE, FULL-ACTUATED MODE, MD 588 (KENWOOD AVE) APPROACHES OPERATE CONCURRENTLY AND HAZELWOOD AVENUE / DELEGGE ROAD APPROACHES OPERATE CONCURRENTLY. MICRO LOOP PROBES SHALL BE PROVIDED FOR ADVANCE DETECTION ALONG MD 588, NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTON MOVEMENTS TO CROSS THE NORTH LEG OF MD 588 AND THE WEST LEG OF HAZELWOOD AVENUE SHALL BE PROVIDED.

### III. SPECIAL NOTES:

A NEMA EIGHT-PHASE, FULL-ACTUATED CONTROLLER WITH ALL NECESSARY EQUIPMENT HOUSED IN A BASE-MOUNTED CABINET AT THE INTERSECTION SHALL BE INSTALLED AT THE INTERSECTION.

CONTRACTOR SHALL PURCHASE AND DELIVER THE 2-WIRE CENTRAL CONTROL UNIT FOR THE CONTROLLER TO SHA SIGNAL SHOP, AT 7491 CONNELLEY ROAD, HANOVER, MD, 21076. MR. EDWARD RODENHIZER AT 410-787-7652 SHALL BE CONTACTED AT LEAST 3 DAYS PRIOR TO THE DELIVERY.

# EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR.

CAT CODE:	QUANTITY	DESCRIPTION
900000	1 EA	NEMA EIGHT-PHASE FULL-ACTUATED CONTROLLER WITH 1-FOUR CHANNEL AMPLIFIER AND ALL NECECCARY EQUIPMENT HOUSED IN A BASE- CABINET
973023	3.75 SF	SHEET ALUMINIUM SIGNS MAST ARM/POLE MOUNTED  4 EA R10-3(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

•	CAT CODES:	QUANTITY	DESCRIPTION
	203030	2 CY	TEST PIT EXCAVATION
	801004	3 CY	CONCRETE FOR SIGNAL FOUNDATION
•	802501	200 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
	805125	45 LF	2" SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
	805135	145 LF	3" SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
	805140	22 LF	4" SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
	805118	115 LF	4" SCHEDULE 80 RIGID PVC CONDUIT - BORED
	811001	2 EA	ELECTRICAL HANDHOLE
	813015	3.75 SF	INSTALL OVERHEAD SIGN
	821003	1 EA	BREAKAWAY BASE SUPPORT SYSTEM FOR TRAFFIC SIGNAL STRUCT
	837001	7 EA	GROUND ROD 3/4 "DIA. X 10' LENGTH
	80.0000	1 EA	2 WIRE NAVIGATOR CENTRAL CONTROL UNIT
	800000	4 EA	AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGN
	800000	4 EA	16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION
	810601	2 EA	MICRO LOOP PROBE WITH 500' LEAD -IN CABLE
	807202	1 EA	METER SERVICE PEDESTAL
	810010	30 LF	ELECTRICAL CABLE 1- CONDUCTOR NO.4 AWG- THHN/THWN
	860292	1 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
	861107	650 LF	ELECTRICAL CABLE 5- CONDUCTOR NO. 14 AWG
	861108	850 LF	ELECTRICAL CABLE 7- CONDUCTOR NO. 14 AWG
	861105	340 LF	ELECTRICAL CABLE 2- CONDUCTOR NO. 14 AWG
	861104	200 LF	ELECTRICAL CABLE 2- CONDUCTOR NO. 14 AWG ALUMINUM SHIELDED
	862101	510 LF	LOOP WIRE NO 14. AWG ENCASED IN 1/4" FLEX TUBING
	862102	225 LF	SAW CUT FOR DETECTION
	805160	24 LF	1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
	818004	1 EA	10' BREAKAWAY PEDESTAL POLE
	805011	30 LF	1" GALVANIZED STEEL DETECTOR SLEEVE
	800000	4 EA	GROUT EXISTING SIGNAL STRUCTURE FOUNDATION
	861116	240 LF	ELECTRICAL CABLE 2- CONDUCTOR NO.12 AWG TRAY CABLE
	871202	1 EA	INSTALL BASE-MOUNTED CABINET
	800000	LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
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# PROJECT CONTACTS:

THE CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

THE CONTACT PERSONS FOR OFFICE OF TRAFFIC AND SAFTEY:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEERTRAFFIC
PHONE: 410-321-2781/2885

MR. EDWARD RODENHIZER
CHIEF, SIGNAL OPERATION SECTION
PHONE: 410-787-7652

MR. DAVID CREIGHTON
ASSISTANT DISTRICT ENGINEERCONSTRUCTION
410-321-2821

MR. ROBERT SNYDER
ASST. CHIEF, TRAFFIC OPERATION DIVISION PHONE: 410-787-7631

MR.STEVE MARCISZEWSKI ASSISTANT DISTRICT ENGINEER-MAINTENANCE PHONE: 410-321-2761

MR. MICHAEL PASQUARIELLO

DISTRICT UTILITY ENGINEER

PHONE: 410-321-2841

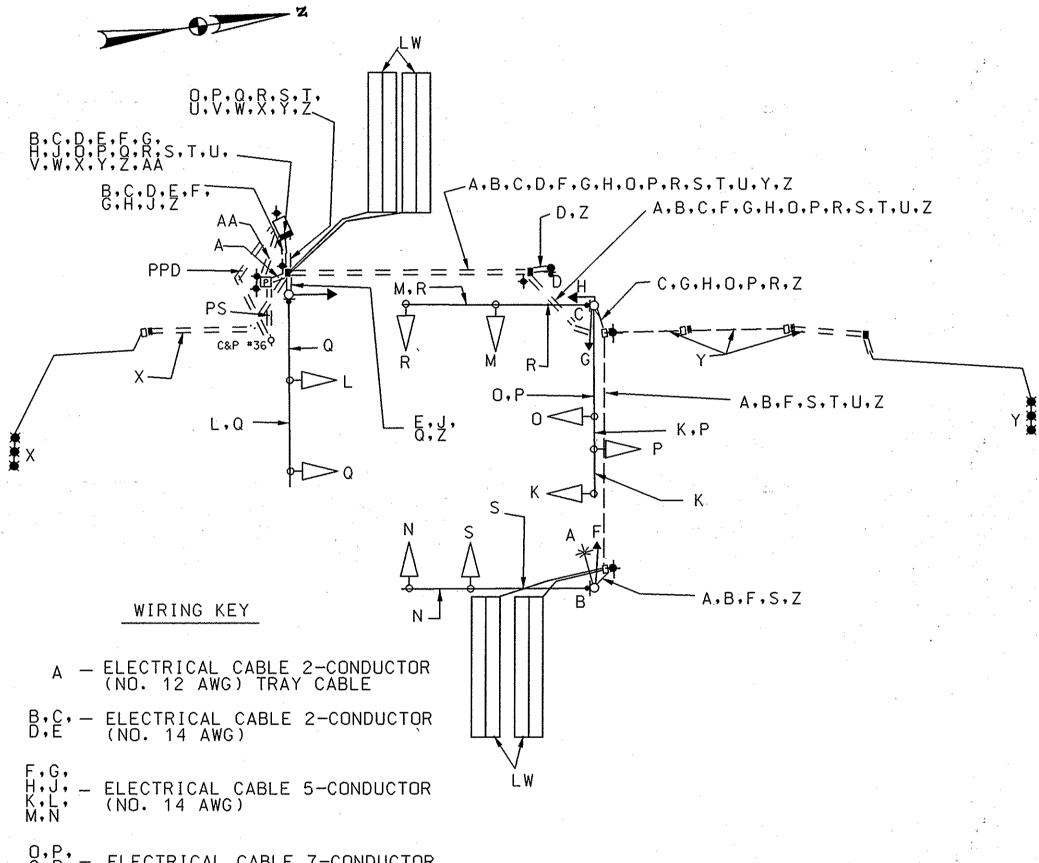
MR. JAY THAKER
PROJECT MANAGER, TRAFFIC
ENGINEERING DESIGN DIVISION
PHONE: 410-582-5682

EQUIPMENT LIST "C"

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

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2 + 6 Change	G	G	G	G	G	R	R	R	R	WK	WK	DW	DW	•— •
Ped Clearance	G	G	G.	G	G	R	R	R	R	FL/WK	FL/WK	DW	DW	4
2 + 6 Change	Y	Υ	Υ	Υ	Υ	R	R	R	R.	DW	DW	DW .	DW	· — •
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Ped Clearance	R	R	R	R	R	G	G	G	G	DW	DW	FL/WK	FL/WK	.
4 + 8 Alt Change	R	R	R	R	R	Υ	Υ	Y	Y	DW	DW	DW	DW	. 41
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	

PHASE CHART



0.P; - ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)

T.U. - ELECTRICAL CABLE 2-CONDUCTOR V.W (NO. 14 AWG) ALUMINUM SHIELDED

X,Y - MICRO LOOP PROBE WITH 500' LEAD -IN CABLE TO CONTROLLER

Z - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE

AA - 1-CONDUCTOR NO. 4 AWG THHN/THWN

LW - LOOP WIRE NO. 14 AWG

PS - PROPOSED UNDERGROUND SERVICE FEED

PPD - PROPOSED UNDERGROUND
PHONE DROP

- GROUND ROD 3√4" DIA × 10' LENGTH

SKA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD. 588 (KENWOOD AVE.) & HAZELWOOD AVE./DELEGGE RD.

**GENERAL INFORMATION SHEET** 

SCALE NONE DATE 02/22/2007 CONTRACT NO. BA5075177

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CENTURY
ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031

DRAWN BY EMM L
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F.A.P. NO. T

DRAWING NO. 2660-B TS- 4 OF 4

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REVISION "B"

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